



Training in Capital Markets: Current Practices, Recommended Products, and Possible Directions for CASE

The Egypt Capital Markets Development Project



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EXECUTIVE SUMMARY

This review of training practices by U.S. financial institutions suggests that U.S. exchanges provide little capital markets training to their staff, while other financial institutions do considerably more. Within the industry, the use of computer-based training (CBT) is increasing. This report describes the CBT products that are the most respected and utilized in the marketplace. We suggest that CASE purchase some of these products for use by those who have reasonable English-language skills. We also suggest that CASE consider participating in the creation of similar products in Arabic with local content. There is an Alexandria-based entity capable of producing quality CD-ROMs, and research indicates that there may be sufficient practical and academic talent to create the subject matter for the programs. Finally, this report presents two ideas for consideration. First that any effective training plan must be closely tied to the business plan of the organization. Second, that CASE consider becoming a knowledge-based or learning-based organization, a powerful strategy for successfully achieving the organization's objectives.

TRAINING IN CAPITAL MARKETS

In order to assist the Cairo and Alexandria Stock Exchanges (CASE) with developing a viable training program for its employees, the Capital Markets Development (CMD) project has undertaken a review of financial training in the United States. What follows is the result of this review.

A. Trends in Training

In its 1998 survey of employer-provided training programs, the American Society for Training and Development found that employers were spending more money on training, conducting programs for a larger percentage of their employees, using more external providers, and increasingly applying technology to the learning process. Increasingly, companies are using computer-based training (CBT) to supplement more traditional training methods. For example, First University, the educational arm of the bank holding company First Union Corp., has been using CBT along with its instructor-led training for the past two years. Such CBT programs have allowed First University to improve the consistency of its training programs, increase quality, and reduce the costs. The cost of training tellers, for example, has been reduced by about 50 percent.

According to *Training Magazine*, as of early 1998 over half the Fortune 1000 companies used CD-ROM training, and one third used Internet-based training. Computer-based training (which includes both CD-ROM and Internet) can be much cheaper, quicker, and more effective than instructor-led classroom training. Of course, the effectiveness of computer-based training depends on the quality of the program being used, but the quality of these programs has been improving.

Simply throwing a program at an employee and telling him or her to learn will probably not be effective. Maury Christensen of Goldman Sachs says that most of their CBT programs are somehow wrapped into a classroom setting. The student uses the program as homework or as something that must be completed prior to a classroom course. Philip Giles, president of CBT Worldwide, believes the best training is a blend of multimedia CD-ROMs and classroom training. Patricia McEveney of Intuition Publishing adds that CBT products work best when the employee is somehow motivated to use the product. This could be achieved through a performance review that makes promotions and raises dependent upon successful completion of the program.

B. What Major Financial Institutions Actually Do

Capital markets training for staff varies greatly from organization to organization, but also appears to differ between exchanges and other financial institutions. Let's look at each of these two groups.

B1. U.S. Exchanges Do Little Staff Training

Most exchanges do not have a formal program for staff training. The exchanges hire the expertise they need and tend to feel that broad-based capital markets training is not really necessary for most exchange jobs. The exceptions seem to be in the legal and regulatory areas where it is felt that staff should have some understanding of the financial products and markets they regulate or discuss in their dealings with federal regulators. For example, the Chicago Board Options Exchange (CBOE) has an Options Institute, a customer-oriented educational

unit. While most CBOE staff never attend classes in the Institute, it is common for the regulatory staff to do so.

The policy of training mainly staff lawyers and regulators is not universal. At the Chicago Mercantile Exchange (CME) it is the trading floor staff that receive incentives to increase their knowledge of markets. The CME also has a customer and trader oriented educational program. All CME staff can attend these afternoon and evening classes for free, but the trading-floor staff are actually moved up the pay scale if they complete a certain number of courses. This policy is not set by the top management level, but rather by the management of the trading floor division.

The New York Stock Exchange (NYSE) does have a “Fundamentals of Securities” course that all staff are expected to attend. It is an eight-hour survey class given two hours a week over four weeks. It covers the history of the NYSE, the relationship between the NYSE and the Securities and Exchange Commission (SEC), regulatory enforcement, and compliance. The course is taught 2-3 times a year and attendance may be less than universal. For other training needs, staff are sent to courses at the New York Institute of Finance.

B2. Other Financial Institutions Are More Involved in Training

Broker/dealers, banks, and insurance companies seem to devote more attention and resources to training staff in capital markets. Most still pursue traditional classroom training methods but the training is more practical. For example, the comprehensive training program offered by the First National Bank of Chicago covers the same areas as MBA finance courses, but explaining how decisions are made and implemented in the real world, rather than in theory.

A strong trend in training at financial institutions appears to be increased use of computer-based training (CBT) programs to supplement traditional classroom training. ABN Amro, for example, believes in and utilizes a combination of classroom, written materials, and CBT programs. Goldman Sachs wants to make training available in as many ways as possible and thus offers CBT programs in the training center, delivered to one's desktop computer, and in conjunction with classroom programs. Merrill Lynch Investment Banking Group is also making extensive use of CBT programs for training. For example, the unit's 230 new recruits are currently in the middle of a two-month training program and are using a number of CBT products either as preparatory work to be completed before they begin a particular classroom-based course or as course homework.

C. Description of the Most Highly Recommended Programs

As a result of discussions with a number of firms and exchanges, the two vendors that came up most frequently were Learning Insights and Zoologic. After spending several days reviewing the products of both companies and comparing them to a few other products, the conclusion is that both should be considered for purchase by CASE.

C1. Learning Insights

The most attractive feature of Learning Insights' programs is their real-world, interactive nature. The student learns by doing, solving problems, and not by simply memorizing material. In many of the firm's products, you have a problem presented to you by the CEO or Managing Director of the firm via video clip. You are then sent off to solve the problem, but you have a lot of resources available to you, including written material, spreadsheets, and video clips of

experts. If a mistake is made, you get some gentle guidance from a coach to get you back on track.

Of the many products offered by Learning Insights, the following seem the best fitted to CASE's needs:

- *Capital Raising Alternatives:* A very comprehensive introduction to all capital market instruments. This is a very rich reference source, containing printed descriptions, many video clips with expert commentary, spreadsheets, and Q&A. It allows the user to compare any two instruments side by side to see which is more appropriate to their needs. While the student could simply go through the whole thing from start to finish, this is probably more satisfying to use as a reference when preparing for a project or meeting—a very good program.
- *Risk Insights:* This award-winning program teaches how to identify, measure, and manage risk using 350 video clips from 15 industry experts. It also contains many spreadsheets and graphics. The program covers equity, interest rate currency, and commodity risk. This program was highly praised by the risk management industry.
- *Foundations of Finance:* In this program, the trainee is greeted by a video clip of the CEO of a retail coffee company who has just hired him. She explains how they need capital to expand the company and wants your advice on how best to do it. She gives the trainee a little background, lays out the problem, and sends him on his way to solve it. The trainee is given the company's financials and is told to whom to talk for advice. The trainee then goes to work on the problem, looking at the company's financials, reading materials, talking to experts, making mistakes, and getting advice, until he solves the problem one step at a time.
- *Financial Analysis and Decision Making:* A case study based program where the user is greeted by the managing director and is asked to advise on an acquisition. In this program, the user learns to analyze financial statements and see the effect of policy changes on those financials by doing “what if” analyses. The student will also talk to the chief financial officer of the company being acquired and read some of the company's paperwork as he makes his recommendations.
- *Introduction to Financial Accounting:* Gives insight to the initial capitalization of a new company, “Café Caliente.” The user is asked by the CEO to appropriately record various transactions and show a series of business transactions in the financials.
- *Corporate Finance Advisor:* Is composed of three modules which teach you how to value a company, how to appropriately design the capital structure of a company, and how to restructure to increase shareholder value when a company's stock is lagging. All three involve interaction with your CEO/boss, with representatives of other companies, and with finance experts. Most of these interactions are via video clips, though you must also do both spreadsheet and library research within the program.

Pricing and fuller descriptions of these products is in the appendix. I have had discussions about CASE and the Learning Insight Products with the following two persons:

- John Stocchetti-CFO and SVP Jstocchetti@learninginsights.com
- Matthew Feldman-Managing Director Mfeldman@learninginsights.com

C2. Zoologic

Zoologic's philosophy is that traditional classroom and textbook approaches are still valid. Reading should be done in a book, not on-line. However, they believe that their products accelerate both learning and increase retention by allowing the student to learn visually by interacting with charts, diagrams, terms, and numbers. The Zoologic products are very different from those of Learning Insights. Zoologic introduces the user to the theory and practice of finance through a series of short, focused modules with self-tests at the end of each. Each module allows the user to experiment with the effect of changing various assumptions on the value of some security. For example, the student can see the value of a bond change as he/she alters market interest rates and maturities. The modules teach both concepts and calculations.

Zoologic has four products, all currently available on CD ROM and soon available via the Internet:

- *Capital Markets 101*: This is the first and most popular of the company's titles. It covers the fundamentals (time value of money, zero coupon rates, forward rates, duration, etc.), as well as a number of modules in the areas of foreign exchange, futures, swaps, and options.
- *Bond Math 101*: This product has 26 modules under the broader categories of bond yield, single payment securities, repo markets, duration and convexity, Treasury auctions, and Treasury Inflation Protected Securities (TIPS).
- *Risk Management 101*: Covers 21 modules under portfolio basics, value at risk (VAR), and Monte Carlo simulations.
- *Corporate Finance 101*: Is the newest product and includes 23 modules under the categories of financial risk models, investment decisions, financing decisions, dividend decisions, and valuation.

Outright purchase of the products is available for \$395 (Corporate Finance 101), \$495 (Capital Markets 101), and \$595 (Risk Management 101 and Corporate Finance 101). Discounts are available when purchasing more than 25 units. Annual leases are available from \$189.99 to as little as \$79.99, based on quantity leased.

- My contact at Zoologic is: Jeff Cohen-Vice President, Sales (212-367-4712)
Jcohen@zoologic.com

C3. Intuition Publishing

This is a Dublin-based company that is expanding globally very rapidly. A training representative at Goldman Sachs recommended their product "Life of a Trade—USA Connect." This product was jointly developed by Goldman, Intuition, and another broker/dealer. It is available only as an Internet or intranet product. Because this product rather late in the research, it was not fully evaluated. One error was found, regarding which the company was alerted. In general, the product provides good information about what happens beyond the broker or trader. As it describes the way a trade is processed in the United States, the program would not be appropriate, in its current form, for training people about how trades are processed in Egypt. It would be useful for those who want to know how things are done in the U.S., and I would recommend it for those looking for international benchmarks in trade processing.

I discussed CASE and Intuition's products with:

- Patricia McEveney Pmceveney@intuitionpublishing.com

C4. Arabization of CBT Products

Do these products need to be translated into Arabic and have their content localized before they are useful to the Egyptian marketplace? The answer is both yes and no. All of the products mentioned could be utilized in their present state by anyone with good English reading and listening abilities. Fluent English speaking is not necessary since the user never speaks back to the program. All communication is by selecting choices and inputting numbers. Since English has become the standard for international financial markets, the use of such English-based products is probably a positive aspect.

It is true that some of the U.S.-based content in these programs, especially the simulations in the Learning Insights products, is irrelevant to Egypt, but exposure to U.S. practices may be positive. In fact, Ashraf Salman, Managing Director of SSG in Cairo, argues forcefully that Egyptian capital market professionals need to be exposed to international practices. Therefore, the products recommended above could be utilized as they are.

However, not everyone in the Egyptian financial markets will also be involved in international markets or dealing with international investors. As English is a second language, learning in that language will necessarily be slower than learning in Arabic. Therefore, Arabic CBT products with local content should be developed for this marketplace.

There are two possible approaches to this. One is to take the existing products, translate them into Arabic, and change some of the content as needed. The other is to design new products from scratch, without any formal or informal link to the products mentioned above.

Regarding the first approach, I discussed with both companies the possibility of having their software translated into Arabic and both are open to the idea. The Zoologic products would be easier to translate, because the program relies on text, graphics, and animation. Learning Insights products often involve video, which is more difficult and costly to alter. Both companies mentioned the possibility of licensing CASE to do the translations under their oversight, to ensure quality control. Learning Insights even mentioned the possibility of allowing CASE to become a distributor of an Arabized version to the rest of the Arabic-speaking world.

Can Arabization of products or the creation of new products be done in Egypt? A research visit to a facility in Alexandria convinces me that the answer is yes. Tamer Raouf El Saadany (CMD) and I visited the facilities of the joint venture between Knowledgey (a large, U.S.-based multi-media training company) and the Arab Academy for Banking and Financial Sciences in Alexandria. This joint venture is headed by Dr. Mohamed Aly Youssef, also Vice President of Educational Resources for the Arab Academy for Banking and Financial Sciences.

Dr. Mohamed Youssef has a studio with 72 professionals producing multi-media computer software for use in schools in a number of Middle Eastern countries. He recently finished a project involving creating interactive CDs for grades 1-12 in Saudi Arabia, and is currently working on software for the schools of Kuwait. He has instructional designers, graphic artists, and animation experts all working on the premises.

The products he creates are CD-ROMs (for use in computers) and CDIs (for use in specialized units you can hook into your TV). While the CDI allows for a broad-based distribution, it may not be appropriate for capital markets training, as TV screens have much poorer definition than computer screens and are very limited in showing more than six or seven lines of numbers. (Incidentally, Dr. Youssef confirmed that within a short time, DVD, with 7 times the capacity, will replace and make both CD-ROM and CDI obsolete.)

While all of the group's experience is in creating educational software for schools, Dr. Youssef is very interested in creating training software. He estimated the cost of creating such CDs at about \$7 to \$10 per CD for minimum quantities of 1,000 to 2,000.

Of course, you would need subject matter specialists to choose the relevant material for the creation of new products. And while you may want some international help in doing so, I believe the requisite talent may already exist in the practitioner and academic communities.

D. Training Ideas for CASE

Based on a survey of actual practices as well as a review of the training literature, what follows are several thoughts on training that may be of use to CASE management.

D1. Tying Training to Exchange Objectives

Organizations exist for a reason. Each organization has a purpose, an objective, a vision, a reason for being. The more conscious the members of every part of the organization are of that objective, the more they are able to gear their activities toward meeting that objective. And the more likely it is that the objective will be achieved and the organization will be successful.

This may apply more to the training function than any other part of the organization. If training is to contribute to the success of the organization, then training goals must be tied to the goals of the organization. The training plan must be tied to, linked with, and based upon, the business plan.

An effective CASE training plan cannot be created without first reaching agreement on the overall vision for the exchange. What is CASE trying to do or to be? What are CASE's major objectives? Based upon my knowledge of exchanges, let me propose some possible objectives:

1. To establish an international reputation as the best of all emerging market exchanges.
2. To establish a regional reputation as an excellent place for investors to invest and traders to trade.
3. To increase the number of companies willing to list on CASE.
4. To increase turnover from both local and international sources.
5. To increase revenues by creating one or more profit centers (including training) within CASE.
6. To become an incubator of talent for the Egyptian financial community.
7. To become a learning organization, where the continual acquisition and sharing of knowledge and information energizes the entire institution.

The training plan will vary depending upon which of these objectives are truly the objectives of CASE. Let us assume that all of these objectives are valid. What would the CASE training plan look like?

D2. Beyond Capital Markets Training

For one thing, to achieve the objectives listed above would take the training effort beyond capital markets. Staff would have to be trained in techniques for expanding company listings and for expanding the investor base both locally and internationally. Here we are moving into the area of marketing.

To build a reputation as the best emerging market exchange, CASE would have to train staff in quality control, customer service, and cost reduction to name a few areas. And more importantly, it would have to train staff to keep the goal of continuous improvement continually in mind.

E. CASE as a Knowledge or Learning-Based Organization

CASE may decide it wishes to go even one step further to become a knowledge or learning-based organization. This means that information, knowledge, and skills are shared, not hoarded as is the tendency in any bureaucratic organization. This also means that the entire exchange buys into the idea of moving the organization forward in its objectives and sharing the information necessary to do so. It should also mean that the most important learning is not that formally devised by the training department, but that which is informally conducted among employees on a continual basis. Surveillance people helping each other to do a better job of monitoring for insider trading. Research people helping each other to create a better statistical fact book. Research helping marketing to improve its efforts to expand listings and the investor base. It is not so much telling each other how to do their job; rather it is passing along information, knowledge, and skills that one person may think is useful to another.

Of course, such information sharing won't work if it depends upon individuals thinking to share information with specific individuals elsewhere in the organization. The flow of information cannot depend upon whether people happen to think of it, but rather needs to be systematized in an organizational intranet, a knowledge network, which allows relevant information to be posted in places that others will know to go to look.

What might CASE's knowledge network look like? This is not the place for a comprehensive answer to this question, but here are some possibilities:

Database of Exchange Knowledge: This would include all the information that should be made available to all employees. The rules and regulations of the exchange, company listings, listing and trading fees, descriptions of products and procedures, exchange history, vision, organization chart, biographies of key officers, key turnover and company statistics, and the international benchmarks the exchange is aiming to match.

Database of Employee Skills: This searchable database would allow top and middle level management to find existing employees with particular skills for special projects, as well as the rapid creation of new units.

Database of Knowledge Resources: This searchable database would list books, articles, classes, and computer-based training programs available for skill enhancement.

The Knowledge Exchange: This bulletin board, possibly with scheduled chat rooms, would allow employees to learn from each other by discussing company and capital market related issues.

Investor Home Page: An internationally oriented English version and an Arabic version, containing all the statistics investors might want in a user-friendly form. It should also include relevant regulatory information and fees, as well as links to CASE's member firms.

A knowledge-based organization can be a very powerful tool to create a highly qualified, highly motivated staff that is empowered to achieve the objectives of the organization. However, such a tool can be effectively utilized only if it has the commitment and support from the highest management in the exchange.

APPENDIX 1: TRAINING AT EXCHANGES AND FINANCIAL INSTITUTIONS

A. Interviews

Those involved in the training function at major securities and derivatives exchanges, as well as at major financial institutions, were interviewed to learn what they do and what could be gained from their experience. Representatives of each institution were asked how they approached training their staff and/or members in capital markets, whether they used computer-based training programs (and if so, what they liked and what they disliked), and how they made use of such programs. What follows is a summary of these conversations.

New York Stock Exchange (NYSE)

Susan Farkus (212-656-5859)

The NYSE offers a single course to its employees, “The Fundamentals of Securities.” This is an eight-hour survey class, given two hours a week over four weeks. The course covers the history of the NYSE, the relationship between NYSE and the Securities and Exchange Commission (the CMA of the U.S.), and regulatory enforcement and compliance. All new employees must take the class, though the course is offered only 2-3 times a year. Any other training required by employees is satisfied by taking courses offered by the New York Institute of Finance. (I was unable to speak with Laverne Owens, head of Human Resources, Training and Development, 212-656-4873. I did, however, speak with Martin Bressler, who runs their Teach the Teacher program, 212-656-5050, but Bressler knew little about staff training.)

Chicago Stock Exchange

Jim Meyerhoff (312-663-2200)

The Chicago Stock Exchange has a one-man training department for both its staff and floor brokers. Jim Meyerhoff was a floor broker at the exchange for almost three decades and now conducts personalized training for all new floor brokers and specialist employees in market operations. His training sessions range from 3 to 20 hours, depending on the situation. The CSE has 30 to 40 specialist firms employing about 200 traders or co-specialists. In addition, there are some 100 floor brokers. He also does an “Equity 101” course for CSE staff.

I observed a session he did for three new staff members, one in the legal department and two in IT. His focus was on the role of each player in the market, the interpretation of quotations, and the differences between the CSE, the NYSE, and the regional exchanges. The CSE conducts three tests for the SEC to qualify specialist employees, floor brokers, and floor traders. Meyerhoff helps people prepare for these exams. His services are free to members and staff; the Exchange pays for his time. Some firms however, choose to train their own staff.

Chicago Mercantile Exchange (CME)

Deborah Lenchard, Director, Education Department (312-930-3397)

The CME has a one-week training program (2 to 3 hours a day) for new exchange members. Should the members wish to act as floor brokers, as well as traders, they must take an additional week of training. The training covers exchange rules governing floor trading behavior as well as such operational procedures as the conventional hand signals for conveying orders and price information.

The CME has no mandatory training for employees. New employees go through a 2-hour orientation, which includes a video and explanation of how various benefits are handled (health insurance, life insurance, pension, etc.).

The exchange does however have a series of classes available to the public, which exchange employees can attend at no cost. The classes are typically 2 hours one evening a week for 8 weeks and include such topics as introduction to futures, introduction to options, foreign exchange markets, stock index futures, technical analysis, and fundamental analysis. While the courses are optional for employees, one department, Trading Floor Services, actually moves employees up the pay scale if they attend a certain number of courses.

Chicago Board Options Exchange (CBOE)

Dick Dufour, Executive Vice President (312-786-7200)

The CBOE generally hires the skills it needs. Upper management feels that neither general training in capital markets, nor specific training in options, is needed for most employees. The CBOE therefore has no internal training program. It does have a training center for the public, known as the Options Institute, to which it will occasionally send employees. This is particularly relevant for people in the regulatory area.

Broker Dealers and other Financial Institutions

ABN AMRO

Judy Davenport, Training Head (904-2172)

Mrs. Davenport strongly approves of both Learning Insights and Zoologic and has been using both products for some time. Recommended contact:

Sharon Egan (312-904-8306)

Egan is in charge of doing training for three groups within the bank: the commercial bank, the investment bank, and the Treasury, i.e. mostly non-retail. Other people handle retail, trust, legal, etc.

She handles both technical and soft-skill training. They have a catalog of internally offered training programs, some (all soft skills) taught by internal staff and some taught by outside vendors. They also design customized courses for their various clients.

They believe in the adult learning theory of see, hear, and touch; in other words, combining classroom, computer-based training programs, and written materials. They like Learning Insights very much, especially the Corporate Finance Consultant and Consultative Selling in Finance. They also liked the Ibbotson Asset Allocation program but did not buy it because it did not fit for their needs precisely. They strongly believe in multimedia products.

Egan highly recommended Ed Jones who has a 3-day train-the-trainer program 401-783-0693, and fax 401-789-2092.

(Other contacts include: Jackie Bower 773-862-0676 who evaluates programs, and Paul Hickey 708-588-0449, Siobhan James 708-904-5384, and Tracey Wik, 708-904-0925, who run a 12-week multi-media training for new college hires.)

Goldman Sachs

Murray Christensen (212-357-7567)

Murray is in the firm-wide Training and Development Group. This is a group of 28 people (22 of whom are in New York) servicing the 17-18,000 Goldman employees worldwide.

Seminars: They offer two types of seminars. The first is a series of seminars on all aspects of their business offered by in-house subject matter experts. These are open enrollment—anyone who wishes can sign up for them. Everyone does some training, especially when they join the firm.

Computer-based training: There are several CBT programs available to all Goldman employees. While the programs are always available in their training center, some divisions, such as Global Operations, have made selected programs available on employee's desktop computers. When asked whether it was better for people to use the programs in the training center, Murray responded that he wants to make the training available in as many ways as possible. Desktop availability was convenient and may be quite useful for some programs that allowed easy bookmarking and were amenable to usage for short periods of time. Nevertheless, the flow of work is often unrelenting, and it may be difficult for employees to carve out the time for training.

Murray said Goldman Sachs has settled on three titles in this area:

1. He praised the Zoologic titles, especially "Capital Markets 101," for which they have a firm-wide license and "Risk Management 101," for which they have spot licenses.
2. He also praised Learning Insights titles, especially "Corporate Finance Advisor," which they may switch from CD ROM to Internet delivery.
3. Intuition Publishing, which developed jointly with Goldman the program "Life of a Trade, Content USA." This covers the fundamentals of securities processing.

Other self-study forms of training: Goldman does not use other print, video, or audio based training, with the exception of videotapes made for the classroom programs they conduct. These are routinely sent to the other offices, like Tokyo and Hong Kong, which don't have much of their own classroom training.

General advice:

1. Do not rely on a single mode of delivery. Deliver training in a number of different ways.
2. Computer-based training works best when wrapped in with some classroom-based training. The computer-based training can be required as a pre-class exercise, as a post-class exercise, or as homework during the period the class is running. There needs to be a time when there can be some human interaction on the issues, an opportunity for some Q&A.

Merrill Lynch Investment Banking Group

Seline Aron (212-670-0815)

Merrill Lynch has distinct training groups for its debt, equity, and investment banking groups. Aron's investment banking training department has five people who run a two-month training program for the bank's several hundred new recruits (there are 230 this year). Most of the training is classroom based and conducted by professors.

The trainers are located in a "war room" adjacent to the training area, to make them more accessible to the trainees.

They integrate their CBT software into the classroom training. For example, prior to their classroom accounting course, they require all students to complete the Learning Insights Introduction to Financial Accounting software. It is a little difficult for students with no accounting background, but it would be too easy if they waited until after the classroom course. They may use it as mid-course homework next year. Both the corporate finance and financial decision making analysis programs are used mid-way through their respective classroom courses.

To use the software, people are scheduled for specific hours in the lab. In some cases they allow people to take the software home or back to their workstations to complete. They must bring back the successfully completed (and personalized) output from the program.

Merrill Lynch emphasized the importance of good customer support when buying training software. One of the principals of Learning Insights came out for two days to help them. Some firms just sell you the product and then forget about you.

Aron emphasized the importance of designing training for specific cultures. You cannot just throw American training programs at emerging markets. Training needs to be highly practical and relevant to the local market. It is best to use trainers who know the local market. The benefit of the training must be clear to the trainees. In the U.S., the rules are more or less set in stone. This is not the case in emerging markets, where practices are evolving and may or may not be consistent with known rules.

Investment Analysts' Society of Chicago (IASC)

Fred Duda, Educational Chairman, (Also Portfolio Manager at Harris and Associates)

Duda believes in on-the-job training. He is a portfolio manager at Harris and Associates. You learn the trade by hanging around the portfolios and asking a lot of questions. If you want to be an analyst, you first become a junior analyst and conduct only analysis.

IASC developed the CFA training software that is now distributed by Learning Insights. They also teach a 17-session classroom-based preparation program for phase 1 of the CFA exams.

Aon Financial Services Group

Mr. Donald Ortelgel, Assistant Vice President (312-701-4985)

Aon Corp. has a central training unit, Aon University, for its 20,000 employees. Ortelgel said his group tends to be on the cutting edge as early adopters of training that eventually gets picked up by the larger group. He felt their institutional brokers needed more sophisticated training in financial-risk management. He wanted a product that was interactive, complete in itself, easy to use, and accessible over the Internet. He feels the Learning Insights' Risk Management software satisfies all of these criteria, except that it is not yet Internet based. (Note that the company says it is moving toward the Internet and has already rolled out one of its products, Introduction to Financial Accounting, on the Internet. The per user price for three log-ons is 1/10 the price of the annual license for the CD version.) Ortelgel uses the Learning Insights software as preparation for a classroom-based course. If he were doing it again, Ortelgel said he would introduce the titles individually rather than all at one time, in order to avoid being overwhelmed.

APPENDIX 2: MAJOR FINANCIAL ACCREDITATION PROGRAMS IN THE U.S.

Since capital markets training and certification or accreditation often go hand-in-hand, it may be useful to review the two major accreditation programs in use in the U.S.

The CFA

The CFA Charter is the most respected certification in the financial industry. It involves a rigorous three-year program of study and three difficult examinations. In addition, the CFA charter is awarded only to those who have at least three years experience in the investment industry and agree to adhere to a strict code of ethics and standards of professional conduct. Those who are awarded the charter are expected to become active members of the Association for Investment Management and Research (AIMR) in order to keep their professional skills up to date.

AIMR was created in 1990 by the merger of two older investment associations. One of these earlier groups was the Institute of Chartered Financial Analysts, which was founded in 1959 to examine candidates and award the CFA charter. AIMR has taken over that function and is now the entity that conducts CFA examinations in 64 countries across the globe, awarding the CFA charter to those candidates who successfully pass all three levels.

AIMR lists some 40 vendors that offer products, courses, or services to assist candidates in their study for the CFA exams. To become a member of AIMR, you must pass all three CFA exams. AIMR currently has 36,000 members in over 80 countries.

Passing all three exams is not an easy task. The average pass rates over the past 35 years were 57% for Level I, 62% for Level II, and 71% for Level III. Nevertheless, the number of candidates enrolling in the CFA program grows each year. In 1998, almost 50,000 candidates worldwide were enrolled in the CFA program and were preparing for one of the three exams.

The CFA exam is given once a year in early summer. It will be given on June 3, 2000 (June 4 in East Asia). Candidates will register and begin studying for the exam nine months prior to August 31, 1999. Late registration is accepted with penalties. Candidates who pass Level I in June 2000, will then register for the Level II exam to be given in the summer of 2001. Those who pass Level II will register for Level III to be given in the summer of 2002. Those who fail may repeat an exam in the subsequent year.

Candidates spend an average 250 hours preparing for each of the exams. All exams are six hours in duration. Level I is multiple choice, while Levels II and III are predominantly problems, cases, and essays.

The CFA program is considered to be a masters level program and a bachelor's degree is required for admission. However, appropriate work experience can be substituted for a bachelor's degree and approximately 16% of all CFA charter holders have done this. Some 33% of those successfully completing the CFA have a masters and 2% have a Ph.D.

NASD Series 7

Perhaps the most widely known and utilized registration in the U.S. financial industry is the Series 7. This is the registration that qualifies an individual to sell virtually every kind of security except futures contracts. The Series 7 is the most comprehensive of the many registrations offered by the National Association of Securities Dealers (NASD), the chief self-regulatory agency in the U.S. securities industry. It allows the successfully registered person (who must pass the Series 7 exam) to solicit customer business to buy and sell corporate equities and debt issues, municipal securities, mutual funds, variable contracts, options, and direct participation programs.

The NASD registers two levels of personnel:

- Registered representatives (mainly sales personnel)
- Principals (officers and management)

The Series 7 exam consists of two parts, each taking up to 3 hours and including 125 multiple choice questions. The exam covers federal securities laws, SEC and NASD rules and regulations, financial products, financial markets, economic theory, risk management, corporate finance, portfolio theory, accounting, taxation, types of customer accounts, and fair sales practices. There are week-long preparation courses for the series 7, often requiring 80 to 100 hours of pre-class study.

For those who wish to limit their activities to one area, there are specialized registrations in the areas of:

- Investment company variable contracts (Series 6)
- Direct participations (Series 22)
- Corporate securities (Series 62)
- Options (Series 42)
- Government securities (Series 72)
- Municipal securities (Series 52)

In addition, the registration of principals involves the areas of supervisory practices, record keeping, net capital calculations and requirements, customer reserves, financial reporting, and extension of credit.

NASD not only tests and qualifies representatives and principals, it also maintains the qualification, employment, and disciplinary histories of more than 500,000 registered securities employees of member firms. (Any broker/dealer in the U.S. doing securities business with the public must be a NASD member.) This data is maintained in the electronic Central Securities Depository (CRD). These records are available to the public upon request.

Note that, following a 1996 reorganization, NASD has two subsidiaries: the well-known NASDAQ Stock Market, and NASD Regulation Inc., which is separate and independent. It is NASD Regulation Inc. that handles the examination, registration, and record keeping described above.